Bernoullis Tafelrunde

Graduate Student Seminar

Thursday, 24 September, 12:15-13:00
Seminarraum 00.003, Spiegelgasse 1

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Distinguishing Knots

Abstract

A knot is an embedding of S^1 in $\mathbb{R}^3$. Knots are defined up to ambient isotopy. The goal of knot theory is to develop efficient techniques to distinguish non isotopic knots. A knot invariant is efficient if it is able to distinguish many knots without being too complicated to compute.

I will define a basic and elegant knot invariant that distinguishes the unknot and the trefoil knot. Than we will build a more elaborate knot invariant : the Alexander polynomial, by using the braid representation of knots (and more generally links).